



5129 N. Shirley St. Suite 100 | Ruston, WA 98407

July 15, 2009

Mr. Kevin L. Rochlin
Remedial Project Manager
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, ECL-111
Seattle, WA 98101

RE: Monthly Report: No. 157, June 2009
Operable Unit No. 02 - Asarco Tacoma Smelter Site

Dear Mr. Rochlin:

Point Ruston is submitting this monthly report per the requirements of paragraph 48 of the Consent Decree for the above referenced site. Point Ruston will continue to provide monthly reports to EPA for the site organized in the same manner as previous reports prepared by Asarco to follow item (a) through (g) of this paragraph.

If you have any questions, please call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric Pilcher".

Eric Pilcher, P.E.
Project Coordinator

Attachment (2 copies)

cc: Chung Ki Yee - Washington Department of Ecology
Evan Griffiths - CH2MHill (2 copies)
Leslie Ann Rose - Citizens for a Healthy Bay
Karen Pickett - ASARCO

Monthly Report 157, June 2009
Operable Unit 02
Asarco Tacoma Smelter Site

A. Actions taken to achieve compliance with the Consent Decree during the previous month.

1. Met with EPA on June 12th and June 19th.
2. Continued weekly site- maintenance logs (see attached).
3. Nuprecon is working with the Navy and its contractors to remove rejected import materials from the site and deliver them to an appropriate Treatment Storage and Disposal Facility (TSD). Nuprecon plans to begin this work the week of July 20th.
4. Maintained clean work area and road
5. Remedial Action activities continued
6. Training activities include the following:
 - Site specific Safety Orientation was held on June 2nd for 1 Cross Connection Specialists employee.
 - Received HAZWOPER refresher training verification for 10 MRC Construction employees on June 5th.
 - Received Consent Agreement signatures from 11 MRC Construction employees on June 5th. Site specific Safety Orientation conducted in-house by MRC.
 - Site specific Safety Orientations were held on June 16th for 12 City of Tacoma employees.
 - Site specific Safety Orientation was held on June 18th for 1 Chuck Madison Concrete employee.
 - Site specific Safety Orientation was held on June 22nd for 1 Utility Detection Services (UDS) employee.
 - Site specific Safety Orientation was held on June 25th for 1 City of Tacoma employee.

B. Summary of sampling, tests, and all other data received or generated by Point Ruston in the previous month.

1. Outfall activities including the following:

Section 2.3 of the Final Statement of Work (SOW) for Remedial Design and Remedial Action – Exhibit F to the Second Amendment requires Point Ruston to continue outfall monitoring. Outfalls will be monitored to determine if the monthly average surface water outfall concentrations for arsenic, copper, and zinc exceed 0.5 ppm at the North and South site outfalls until they are abandoned.

Weekly composite samples will be collected at each outfall during the construction season. During the winter season, outfall samples will be collected every other month. Asarco began the following schedule in May of 2003 which Point Ruston will continue to implement: weekly composite

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samples will be collected from May-October, and in December, February, and April.

June outfall samples were submitted to the lab on 7/6/09. Sample analysis is not yet complete. Results will be submitted in the July report.

2. Point Ruston collects OCF leachate in a 5,000 gallon polyethylene tank for offsite shipment and disposal. LCRS and LDCRS volumes are monitored weekly in accordance with the draft OCF OMMP. LCRS volumes currently average approximately 94 gallons per day on the LCRS (see attached correspondence and data). A sample was collected on June 22nd; however, no leachate was shipped in June. Results from the sample are attached (5.2 ppm).
3. Point Ruston performs perimeter air monitoring at three locations on the site: NW Corner of OCF, OCF Vault #1 (upper vault), South Gate. Air monitoring began on April 10th, 2008. Results for samples collected from June 1st through July 2nd are attached. There were no exceedances. Air monitoring results are also transmitted electronically to EPA for posting on the Region 10 website. Please note that due to mechanical errors, samples could not be obtained at the South Gate on June 1st or 5th. The problems have since been corrected.

Ken Wilson performed a site inspection and audit of the Hi-Vol air monitors on June 4th.

4. Point Ruston performs personal air monitoring in accordance with WAC 296-848-20060(1) & WAC 296-155-17609(1)(a) to determine if the airborne concentrations of arsenic and lead exceed the PEL. Personal air monitoring was performed on June 11th and 12th during mowing and equipment decon activities. Results for samples collected are attached. There were no exceedances.

C. Work Plans and other deliverables completed and submitted during the previous month.

1. Plans and Documents included the following:
 - An efficacy Study for use of Envirotac II as a temporary cap was submitted on June 12th, comments were received on June 20th.
2. Remedial Action included the following tasks:
 - OCF construction activities:
 - Maintained leachate collection system.

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- Stack Hill construction activities:
 - Maintained erosion and surface water controls; specifically on Commercial Street cul-de-sac area
 - Continued home construction
 - Maintained site perimeter fence and signage at the north end of Stack Hill.
- Site-wide remediation/redevelopment activities:
 - Continued surface water controls
 - Maintained haul roads and stockpiles onsite
 - Maintained erosion and surface water controls
 - Continued Building 2B construction
 - Constructed retaining wall and new pad for OCF transformer
 - MRC finished construction of new, metal framed, tire wash on June 12th.
 - City of Tacoma imported asphalt grindings June 16th – June 19th. The material was sampled and tested prior to import, and results received June 15th. The material tested below MTCA levels for Arsenic and Lead.
 - Performed sub-surface investigation along Ruston Way via potholing on June 12th and 15th. Results indicate that buried woody debris may not be as extensive as previously reported in PA 3.0/8.0. Test results from pothole excavations were above MTCA levels, but in ranges similar to soils excavated from OU04.

D. *Actions scheduled for the next six weeks.*

1. Address any new or remaining comments on CMP – Master Infrastructure and Stack Hill Face
2. Submit the Upland OMMP
3. Submit Revision 5 of the Construction Health and Safety Plan together with an updated Spanish translation
4. Submit a Sequencing of Development and Occupancy and Temporary Cap Plan and implement a protocol to verify the effectiveness of Envirotac for use on-site as an element of the temporary cap to control and inhibit dust
5. Submit Point Ruston CC&Rs
6. Consolidate PA documents as relevant to current RA plan
7. Construction activities for mass grading and Master Infrastructure
8. Meet with Tacoma Metro Parks to discuss the RA for the slag peninsula
9. The following Remedial Action tasks are planned to continue:

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RA Monitoring:

- Outfall sampling (weekly composite samples) during scheduled months
- Air monitoring during remedial action activities

OCF OMMP activities:

- Continue collection of leachate for offsite disposal
- Continue monitoring of leachate volumes

Stack Hill construction activities:

- Erosion controls and site maintenance
- Continue home construction
- Begin face cap installation

Site-wide construction activities:

- Continue surface water controls
- Maintain roads and stockpiles onsite
- Maintain erosion controls
- Complete Building 2B foundation
- Begin master infrastructure construction
- Complete OCF Transformer relocation

E. Percentage completion, unresolved delays encountered or anticipated that may affect schedule, and efforts to mitigate delays.

1. Point Ruston is completing land use permitting for development on the lower site with the City of Tacoma & Town of Ruston. Shoreline Substantial Development Permits (Tacoma and Ruston) and Conditional Use Permit (Ruston) have been approved in both municipalities.

A Request for Reconsideration was filed against the Tacoma shoreline permits. The shoreline permit was upheld, but has since been appealed to the Hearings Examiner on March 6th. The Tacoma hearing is scheduled for July 8th, 9th, and 10th.

The Ruston shoreline permit was similarly appealed to the Shoreline Hearings Board (SHB). A hearing with the SHB was held on June 8th, 9th, and 10th. While the shoreline permit was upheld, the official decision may take through the end of August.

F. Modifications to work plans or schedules proposed to or approved by EPA.

1. The Second Amendment to the Consent Decree was finalized and the sale of the property to Point Ruston LLC completed on October 31, 2006.

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2. Point Ruston and EPA have coordinated the issuance of an Explanation of Significant Differences (ESD) for the addition of the demolition project which will remove the 2,300 creosote piles encompassing the 3 docks along the frontage of the property. A pre-ESD letter approved this project as a clean-up action under CERCLA, and Point Ruston and the Dept. of Natural Resources continue to pursue funding with an anticipated August construction start date.
- G. *Activities undertaken to support Community Relations Plan during the previous month and planned for the next four weeks.*
1. Point Ruston attends the Town of Ruston's Town Council meetings routinely to answer question or give briefings regarding the status of RA and development planning activities (1st and 3rd Monday of each month).
 2. Point Ruston is working with the City of Tacoma on development plans which incorporate remediation components for the site.
 3. Point Ruston is working with MetroParks to incorporate the capping component into the Peninsula Park design, and is in talks to establish a Memorandum of Agreement to engage in design consultation for this site.
 4. Point Ruston will meet with the Town of Ruston, City of Tacoma and MetroParks to address operation, maintenance, and monitoring issues at the site.



ENERGY LABORATORIES, INC. • P.O. Box 30916 • 1120 South 27th Street • Billings, MT 59107-0916
800-735-4489 • 406-252-6325 • 406-252-6069 fax • eli@energylab.com

ANALYTICAL SUMMARY REPORT

June 29, 2009

Tim Rusher
Point Ruston LLC
5219 N Shirley St Ste 100
Tacoma, WA 98407

RECEIVED
JUL 02 2009
BY:

Workorder No.: B09062179

Project Name: Tacoma Smelter, OCF-Leachate

Energy Laboratories Inc received the following 1 sample for Point Ruston LLC on 6/23/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B09062179-001	Leachate, TSM060922	06/22/09 8:21	06/23/09	Aqueous	Metals by ICP, Total Metals Preparation by EPA 200.2

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By: _____



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LABORATORY ANALYTICAL REPORT

Client: Point Ruston LLC Report Date: 06/29/09
Project: Tacoma Smelter, OCF-Leachate Collection Date: 06/22/09 08:21
Lab ID: B09062179-001 Date Received: 06/23/09
Client Sample ID: Leachate, TSM060922 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TOTAL							
Arsenic	5.2	mg/L		0.1		E200.7	06/27/09 03:08 / tao

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



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QA/QC Summary Report

Client: Point Ruston LLC

Report Date: 06/29/09

Project: Tacoma Smelter, OCF-Leachate

Work Order: B09062179

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7	Batch: 39695								
Sample ID: MB-39695	Method Blank			Run: ICP202-B_090626A			06/27/09 02:43		
Arsenic	ND	mg/L	0.04						
Sample ID: LCS5-39695	Laboratory Control Sample			Run: ICP202-B_090626A			06/27/09 02:47		
Arsenic	0.489	mg/L	0.038	98	85	115			
Sample ID: B09062093-002BMS5	Sample Matrix Spike			Run: ICP202-B_090626A			06/27/09 02:54		
Arsenic	0.473	mg/L	0.19	95	70	130			
Sample ID: B09062093-002BMSD5	Sample Matrix Spike Duplicate			Run: ICP202-B_090626A			06/27/09 02:57		
Arsenic	0.528	mg/L	0.19	106	70	130	11	20	
Method: E200.7	Analytical Run: ICP202-B_090626A								
Sample ID: ICV	Continuing Calibration Verification Standard			06/26/09 12:16					
Arsenic	2.54	mg/L	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Energy Laboratories Inc

Workorder Receipt Checklist



Point Ruston LLC

B09062179

Login completed by: Krystal McDonald

Date and Time Received: 6/23/2009 10:15 AM

Reviewed by: BL2000\ruby

Received by: lsc

Reviewed Date: 6/23/2009 3:50:20 PM

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature:	15°C		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input type="checkbox"/>

Contact and Corrective Action Comments:

None

CHAIN OF CUSTODY RECORD

**POINT
RUSTON**

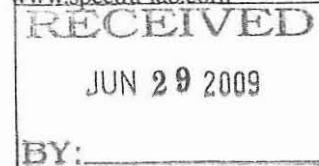
 5219 N. Shiley St., Suite 100 Tacoma, WA 98407
 Phone: 253-752-2185 Fax: 253-752-7083

PROJ. NO	PROJECT NAME					NO. OF CONTAINERS	REMARKS
TACOMA Smelter	OCF - LEACHATE						
DATE	STA #	TIME	COMP	GRAB	SAMPLE NUMBER		
10/22/09	LEACHATE	8:21		✓	TSMPL#0922	1	* RISK ANALYSIS *
<i>Please Email Results</i>							
<i>To:</i> <i>Tim2@BINTRUSTON.com</i>							
<i>THANK YOU</i>							
Relinquished (Signature)	Date/Time	Received by: (Signature)	Lab	Shipped via <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> UPS or Other _____ Air Bill # _____			
Relinquished (Signature)	Date/Time	Received by: (Signature)	Remarks				
Relinquished (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Enclosed: <input type="checkbox"/> Parameter List with DTLs <input type="checkbox"/> Cover Letter			
<i>Lori Cadman</i> <i>10/23/09 10:15</i> <i>15°C Seal on</i> <i>Bottle</i>				Split Samples: <input type="checkbox"/> Accepted <input type="checkbox"/> Declined _____ <i>Signature</i>			



SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com



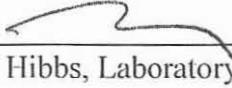
06/24/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Exposure evaluation
Sample Matrix: Air Cassette
Date Sampled: 06/11/2009
Date Received: 06/16/2009
Spectra Project: 2009060322

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>
061109-719	1	Arsenic	0.095	µg/m³	SW846 6020A
061109-719	1	Lead	0.23	µg/m³	SW846 6020A
061109-181	2	Arsenic	0.10	µg/m³	SW846 6020A
061109-181	2	Lead	0.16	µg/m³	SW846 6020A
061209-646	3	Arsenic	1.1	µg/m³	SW846 6020A
061209-646	3	Lead	1.6	µg/m³	SW846 6020A
061209-123	4	Arsenic	< 0.004	µg/m³	SW846 6020A
061209-123	4	Lead	< 0.004	µg/m³	SW846 6020A

SPECTRA LABORATORIES


Steve Hibbs, Laboratory Manager

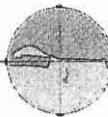
a7/sej

PAGE 1 OF 1

CHAIN OF CUSTODY RECORD

2009060322

**POINT
RUSTON**

 5219 N. Shirley St., Suite 100
 Tacoma, WA 98407
 Phone: 253-752-2185
 Fax: 253-752-7083


PROJ. NO SITE		PROJECT NAME EXPOSURE EVALUATION					NO. OF CONTAINERS							
SAMPLERS: (Signature) <i>[Handwritten Signature]</i>														
DATE	STA #	TIME	COMP	GRAB	SAMPLE NUMBER							REMARKS		
09/11/09	LOGAN			✓	061109-119		1	✓						
09/11/09	John			✓	061109-181		1	✓						
09/12/09	John			✓	061209-10416		1	✓						
09/12/09	LOGAN			✓	061209-123		1	✓					BROKEN CASSETTE	
													PLEASE E-MAIL RESULTS To: Tim2@PointRuston.com	
Relinquished (Signature) <i>[Handwritten Signature]</i>			Date/Time 09-16-0420		Received by: (Signature) <i>[Handwritten Signature]</i>		Lab		Shipped via: FedEx, UPS or Other _____ Air Bill # _____					
Relinquished (Signature)			Date/Time		Received by: (Signature)		Remarks							
Relinquished (Signature)			Date/Time		Received for Laboratory by: (Signature)		Date/Time	Enclosed: <input type="checkbox"/> Parameter List with DTLs <input type="checkbox"/> Cover Letter						
													Split Samples: <input type="checkbox"/> Accepted <input type="checkbox"/> Declined _____	
													Signature	

**SPECTRA LABORATORIES - ELECTRONIC DISK DELIVERABLE REPORT
PERSONAL AIR MONITORING**

6130109

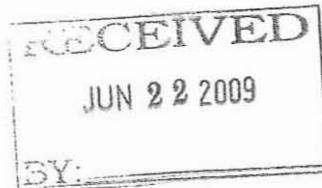
**SPECTRA LABORATORIES - ELECTRONIC DISK DELIVERABLE REPORT
PERSONAL AIR MONITORING**

SPECTRA LABORATORIES - ELECTRONIC DISK DELIVERABLE REPORT
PERSONAL AIR MONITORING

CLIENT ID	CLIENT PROJECT	SPECTRA Project #	Matrix	Date Sampled	Date Analyzed	Method	Analyte Compound	Result	Data Qualifiers	Units	TWA ₈	Units	Phase	Task	Company
022709-646	Building 2B	2009030016	Air Cassette Filter	2/27/2009	3/12/2009	SW846 6020A	Arsenic	0.140		µg/m³	0.15050	µg/m³	Sizing Concrete	Ground Spotter	Point Ruston, LLC
022709-181	Building 2B	2009030016	Air Cassette Filter	2/27/2009	3/12/2009	SW846 3050B	Digestion	d							Point Ruston, LLC
022709-646	Building 2B	2009030016	Air Cassette Filter	2/27/2009	3/12/2009	SW846 3050B	Digestion	f							Point Ruston, LLC
030209-181	Concrete Stockpile	2009030158	Air Cassette Filter	3/2/2009	3/10/2009	SW846 6020A	Lead	0.085		µg/m³	0.10041	µg/m³	Sizing Concrete	Equip. Operator	Point Ruston, LLC
030209-181	Concrete Stockpile	2009030158	Air Cassette Filter	3/2/2009	3/10/2009	SW846 6020A	Arsenic	0.140		µg/m³	0.16538	µg/m³	Sizing Concrete	Equip. Operator	Point Ruston, LLC
030209-646	Concrete Stockpile	2009030158	Air Cassette Filter	3/2/2009	3/10/2009	SW846 6020A	Lead	0.640		µg/m³	0.74667	µg/m³	Sizing Concrete	Equip. Operator	Point Ruston, LLC
030209-646	Concrete Stockpile	2009030158	Air Cassette Filter	3/2/2009	3/10/2009	SW846 6020A	Arsenic	1.300		µg/m³	1.51667	µg/m³	Sizing Concrete	Equip. Operator	Point Ruston, LLC
030209-646	Concrete Stockpile	2009030158	Air Cassette Filter	3/2/2009	3/10/2009	SW846 3050B	Digestion	d							Point Ruston, LLC
030209-181	Concrete Stockpile	2009030158	Air Cassette Filter	3/2/2009	3/10/2009	SW846 3050B	Digestion	s							Point Ruston, LLC
030309-181	Concrete Stockpile	2009030158	Air Cassette Filter	3/3/2009	3/10/2009	SW846 6020A	Arsenic	0.230		µg/m³	0.23958	µg/m³	Sizing Concrete	Equip. Operator	Point Ruston, LLC
030309-123	Concrete Stockpile	2009030158	Air Cassette Filter	3/3/2009	3/10/2009	SW846 6020A	Arsenic	0.330		µg/m³	0.34306	µg/m³	Sizing Concrete	Ground Spotter	Point Ruston, LLC
030309-181	Concrete Stockpile	2009030158	Air Cassette Filter	3/3/2009	3/10/2009	SW846 6020A	Lead	0.360		µg/m³	0.37500	µg/m³	Sizing Concrete	Equip. Operator	Point Ruston, LLC
030309-123	Concrete Stockpile	2009030158	Air Cassette Filter	3/3/2009	3/10/2009	SW846 6020A	Lead	0.510		µg/m³	0.53019	µg/m³	Sizing Concrete	Ground Spotter	Point Ruston, LLC
030309-123	Concrete Stockpile	2009030158	Air Cassette Filter	3/3/2009	3/10/2009	SW846 3050B	Digestion	d							Point Ruston, LLC
030309-181	Concrete Stockpile	2009030158	Air Cassette Filter	3/3/2009	3/10/2009	SW846 3050B	Digestion	g							Point Ruston, LLC
030409-181	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Arsenic	0.120		µg/m³	0.11275	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030409-181	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Lead	0.170		µg/m³	0.15973	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030409-719	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Arsenic	0.250		µg/m³	0.24479	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030409-719	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Lead	0.270		µg/m³	0.26438	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030409-123	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Lead	0.390		µg/m³	0.38513	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030409-123	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Arsenic	0.460		µg/m³	0.45425	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030409-646	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Arsenic	0.970		µg/m³	0.93363	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030409-646	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Lead	0.980		µg/m³	0.94325	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030409-181	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Digestion	i							Diamond Concrete, LLC
030409-646	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Digestion	i							Diamond Concrete, LLC
030409-719	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Digestion	i							Diamond Concrete, LLC
030409-123	Building 2B	2009030157	Air Cassette Filter	3/4/2009	3/10/2009	SW846 6020A	Digestion	i							Diamond Concrete, LLC
030609-719	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Arsenic	< 0.004	U	µg/m³	< 0.00089	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030609-719	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Lead	< 0.004	U	µg/m³	< 0.00089	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030609-646	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Lead	0.061		µg/m³	0.06125	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030609-646	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Arsenic	0.062		µg/m³	0.06226	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030609-181	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Arsenic	0.071		µg/m³	0.07144	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030609-181	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Lead	0.170		µg/m³	0.17106	µg/m³	Form Footing	Foundation Worker	Diamond Concrete, LLC
030609-181	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Digestion	g							Diamond Concrete, LLC
030609-719	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Digestion	j							Diamond Concrete, LLC
030609-646	Building 2B	2009030157	Air Cassette Filter	3/6/2009	3/10/2009	SW846 6020A	Digestion	i							Diamond Concrete, LLC
042109-719	Galiger Drive Demo	2009040441	Air Cassette Filter	4/21/2009	4/29/2009	SW846 6020A	Arsenic	0.430		µg/m³	0.58946	µg/m³	Demolition	Dust Control	Point Ruston, LLC
042109-719	Galiger Drive Demo	2009040441	Air Cassette Filter	4/21/2009	4/29/2009	SW846 3050B	Digestion	f					Demolition	Dust Control	Point Ruston, LLC
042109-719	Galiger Drive Demo	2009040441	Air Cassette Filter	4/21/2009	4/29/2009	SW846 6020A	Lead	0.460		µg/m³	0.63058	µg/m³	Demolition	Dust Control	Point Ruston, LLC
042109-123	Galiger Drive Demo	2009040441	Air Cassette Filter	4/21/2009	4/29/2009	SW846 6020A	Arsenic	0.150		µg/m³	0.18844	µg/m³	Demolition	Equip. Operator	Point Ruston, LLC
042109-123	Galiger Drive Demo	2009040441	Air Cassette Filter	4/21/2009	4/29/2009	SW846 3050B	Digestion	g					Demolition	Equip. Operator	Point Ruston, LLC
042109-123	Galiger Drive Demo	2009040441	Air Cassette Filter	4/21/2009	4/29/2009	SW846 6020A	Lead	0.130		µg/m³	0.16331	µg/m³	Demolition	Equip. Operator	Point Ruston, LLC
042209-181	Building 2B	2009040440	Air Cassette Filter	4/22/2009	4/29/2009	SW846 6020A	Arsenic	< 0.004	U	µg/m³	< 0.00411	µg/m³	Plumbing	Groundwork	DM Kelly Mechanical
042209-181	Building 2B	2009040440	Air Cassette Filter	4/22/2009	4/29/2009	SW846 3050B	Digestion	d					Plumbing	Groundwork	DM Kelly Mechanical
042209-181	Building 2B	2009040440	Air Cassette Filter	4/22/2009	4/29/2009	SW846 6020A	Lead	< 0.004	U	µg/m³	< 0.00411	µg/m³	Plumbing	Groundwork	DM Kelly Mechanical
042209-123	Building 2B	2009040440	Air Cassette Filter	4/22/2009	4/29/2009	SW846 6020A	Arsenic	< 0.004	U	µg/m³	< 0.00412	µg/m³	Plumbing	Groundwork	DM Kelly Mechanical
042209-123	Building 2B	2009040440	Air Cassette Filter	4/22/2009	4/29/2009	SW846 3050B	Digestion	d					Plumbing	Groundwork	DM Kelly Mechanical
042209-123	Building 2B	2009040440	Air Cassette Filter	4/22/2009	4/29/2009	SW846 6020A	Lead	< 0.004		µg/m³	< 0.00412	µg/m³	Plumbing	Groundwork	DM Kelly Mechanical
042209-719	Building 2B	2009040440	Air Cassette Filter	4/22/2009	4/29/2009	SW846 6020A	Arsenic	< 0.004	U	µg/m³	< 0.00413	µg/m³	Plumbing	Groundwork	DM Kelly Mechanical
042209-719	Building 2B	2009040440	Air Cassette Filter	4/22/2009	4/29/2009	SW846 3050B	Digestion	d					Plumbing	Groundwork	DM Kelly Mechanical
061109-719	Exposure evaluation	2009060322	Air Cassette Filter	6/11/2009	6/24/2009	SW846 6020A	Arsenic	0.095		µg/m³	0.10094	µg/m³	Site Work	Mowing	Point Ruston, LLC
061109-719	Exposure evaluation	2009060322	Air Cassette Filter	6/11/2009	6/24/2009	SW846 3050B	Digestion	d					Site Work	Mowing	Point Ruston, LLC
061109-719	Exposure evaluation	2009060322	Air Cassette Filter	6/11/2009	6/24/2009	SW846 6020A	Lead	0.230		µg/m³	0.24438	µg/m³	Site Work	Mowing	Point Ruston, LLC
061109-181	Exposure evaluation	2009060322	Air Cassette Filter	6/11/2009	6/24/2009	SW846 6020A	Arsenic	0.100		µg/m³	0.10521	µg/m³	Site Work	Mowing	Point Ruston, LLC
061109-181	Exposure evaluation	2009060322	Air Cassette Filter	6/11/2009	6/24/2009	SW846 3050B	Digestion	d					Site Work	Mowing	Point Ruston, LLC
061109-181	Exposure evaluation	2009060322	Air Cassette Filter	6/11/2009	6/24/2009	SW846 6020A	Lead	0.160		µg/m³	0.16833	µg/m³	Site Work	Mowing	Point Ruston, LLC
061109-181	Exposure evaluation	2009060322	Air Cassette Filter	6/11/2009	6/24/2009	SW846 6020A	Arsenic	1.100		µg/m³	0.29104	µg/m³	Site Work	Decon Equipment	Point Ruston, LLC
061209-646	Exposure evaluation	2009060322	Air Cassette Filter	6/12/2009	6/24/2009	SW846 3050B	Digestion	d					Site Work	Decon Equipment	Point Ruston, LLC
061209-646	Exposure evaluation	2009060322	Air Cassette Filter	6/12/2009	6/24/2009	SW846 6020A	Lead	1.600		µg/m³	0.42333	µg/m³	Site Work	Decon Equipment	Point Ruston, LLC
061209-646	Exposure evaluation	2009060322	Air Cassette Filter	6/12/2009	6/24/2009	SW846 6020A	Arsenic	< 0.004	U	µg/m³	< 0.00199	µg/m³	Site Work	Decon Equipment	Point Ruston, LLC
061209-123	Exposure evaluation	2009060322	Air Cassette Filter	6/12/2009	6/24/2009	SW846 3050B	Digestion	d					Site Work	Decon Equipment	Point Ruston, LLC
061209-123	Exposure evaluation	2009060322	Air Cassette Filter	6/12/2009	6/24/2009	SW846 6020A	Lead	< 0.004	U	µg/m³	< 0.00199	µg/m³	Site Work	Decon Equipment	Point Ruston, LLC
061209-123	Exposure evaluation	2009060322	Air Cassette Filter	6/12/2009	6/24/2009	SW846 6020A	Arsenic	< 0.004					Site Work	Decon Equipment	Point Ruston, LLC

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06/19/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-vol)
Date Received: 06/08/2009
Spectra Project: 2009060155

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189843	1	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/01/2009
8189843	1	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/01/2009
8189842	2	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/01/2009
8189842	2	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/01/2009
8189844	3	Arsenic	0.10	µg/m3	SW846 6010B	Filter	06/02/2009
8189844	3	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/02/2009
8189840	4	Arsenic	0.11	µg/m3	SW846 6010B	Filter	06/02/2009
8189840	4	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/02/2009
8189839	5	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/02/2009
8189839	5	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/02/2009
8189841	6	Arsenic	0.05	µg/m3	SW846 6010B	Filter	06/03/2009
8189841	6	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/03/2009
8189838	7	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/03/2009
8189838	7	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/03/2009
8189837	8	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/03/2009
8189837	8	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/03/2009

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Steve Hibbs, Laboratory Manager
a8/ng

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06/19/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-vol)
Date Received: 06/08/2009
Spectra Project: 2009060155

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189835	9	Arsenic	0.14	µg/m ³	SW846 6010B	Filter	06/04/2009
8189835	9	Lead	0.06	µg/m ³	SW846 6010B	Filter	06/04/2009
8189834	10	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/04/2009
8189834	10	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/04/2009
8189833	11	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/04/2009
8189833	11	Lead	0.10	µg/m ³	SW846 6010B	Filter	06/04/2009
8189831	12	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/05/2009
8189831	12	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/05/2009
8189830	13	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/05/2009
8189830	13	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/05/2009
8189836	14	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/05/2009
8189836	14	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/05/2009

SPECTRA LABORATORIES

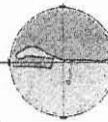
Steve Hibbs, Laboratory Manager
a8/ng

PAGE 1 of 1

CHAIN OF CUSTODY RECORD

2009060155

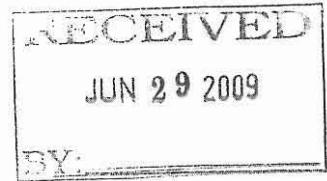
**POINT
RUSTON**

 5219 N. Shirley St., Suite 100 Tacoma, WA 98407
 Phone: 253-752-2185 Fax: 253-752-7083


PROJ. NO		PROJECT NAME		REMARKS			
AIR MONITORING		POINT RUSTON, LLC Hi-VOL					
SAMPLERS: (Signature)		<i>John P. Bush</i> J.P.B.					
DATE	STA #	TIME	COMP		SAMPLE NUMBER	NO. OF CONTAINERS	REMARKS
6/1/09	OCF-VI		✓		8189843	1 ✓	
6/1/09	OCF-NW		✓		8189842	1 ✓	PLEASE E-MAIL RESULTS
6/1/09	SG		✓		8189844	1 ✓	To:
6/1/09	OCF-VI		✓		8189840	1 ✓	Tim2@PointRuston.com
6/1/09	OCF-NW		✓		8189839	1 ✓	
6/1/09	SG		✓		8189841	1 ✓	
6/1/09	OCF-VI		✓	8189838	1 ✓		
6/1/09	OCF-NW		✓	8189837	1 ✓		
6/1/09	SG		✓	8189835	1 ✓		
6/1/09	OCF-VI		✓	8189834	1 ✓		
6/1/09	OCF-NW		✓	8189833	1 ✓		
6/1/09	OCF-VI		✓	8189831	1 ✓		
6/1/09	OCF-NW		✓	8189830	1 ✓		
6/3/09	CONTAN		✓	81898360	1 ✓		
Relinquished (Signature)				Date/Time	Received by: (Signature)	Lab	Shipped via: FedEx, UPS or Other _____ Air Bill # _____
<i>John P. Bush</i>				06-08 1257	<i>John P. Bush</i>	<i>SPERTRA</i>	
Relinquished (Signature)				Date/Time	Received by: (Signature)	Remarks	
Relinquished (Signature)				Date/Time	Received for Laboratory by: (Signature)	Date/Time	Enclosed: <input type="checkbox"/> Parameter List with DTLs <input type="checkbox"/> Cover Letter
Split Samples: <input type="checkbox"/> Accepted <input type="checkbox"/> Declined _____ <i>Signature</i>							

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06/25/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-vol)
Date Received: 06/16/2009
Spectra Project: 2009060321

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189829	1	Arsenic	0.06	µg/m³	SW846 6010B	Filter	06/08/2009
8189829	1	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/08/2009
8189828	2	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/08/2009
8189828	2	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/08/2009
8189827	3	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/08/2009
8189827	3	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/08/2009
8189826	4	Arsenic	0.07	µg/m³	SW846 6010B	Filter	06/09/2009
8189826	4	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/09/2009
8189825	5	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/09/2009
8189825	5	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/09/2009
8189824	6	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/09/2009
8189824	6	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/09/2009
8189823	7	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/10/2009
8189823	7	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/10/2009
8189822	8	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/10/2009
8189822	8	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/10/2009

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager
a8/scj



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06/25/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-vol)
Date Received: 06/16/2009
Spectra Project: 2009060321

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189821	9	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/10/2009
8189821	9	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/10/2009
8189820	10	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/11/2009
8189820	10	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/11/2009
8189819	11	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/11/2009
8189819	11	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/11/2009
8189818	12	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/11/2009
8189818	12	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/11/2009
8189816	13	Arsenic	0.06	µg/m³	SW846 6010B	Filter	06/12/2009
8189816	13	Lead	0.05	µg/m³	SW846 6010B	Filter	06/12/2009
8189815	14	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/12/2009
8189815	14	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/12/2009
8189814	15	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/12/2009
8189814	15	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/12/2009
8189817	16	Arsenic	< 0.05	µg/m³	SW846 6010B	Filter	06/11/2009
8189817	16	Lead	< 0.05	µg/m³	SW846 6010B	Filter	06/11/2009

SPECTRA LABORATORIES



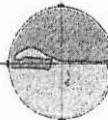
Steve Hibbs, Laboratory Manager
a8/scj

PAGE 1092

CHAIN OF CUSTODY RECORD

200906072

**POINT
RUSTON**

 5219 N. Shirley St., Suite 100 Tacoma, WA 98407
 Phone: 253-752-2185 Fax: 253-752-7083


PROJ. NO		PROJECT NAME		NO. OF CONTAINERS	REMARKS											
AIR MONITORING		POINT RUSTON, LLC HI-VOL				AS + Pb										
DATE		STA #	TIME	COMP	GRAB	SAMPLE NUMBER										
9/8/09	SG			✓		8189829	1	✓								
9/8/09	DCF-VI			✓		8189828	1	✓								
6/8/09	DCF-NW			✓		8189827	1	✓						PLEASE E-MAIL RESULTS		
6/9/09	SG			✓		8189826	1	✓						To: Tim2@POINTRUSTON.com		
6/9/09	DCF-VI			✓		8189825	1	✓								
6/9/09	DCF-NW			✓		8189824	1	✓								
6/10/09	SG			✓		8189823	1	✓								
9/10/09	DCF-VI			✓		8189822	1	✓								
6/10/09	DCF-NW			✓		8189821	1	✓								
6/11/09	SG			✓		8189820	1	✓								
6/11/09	DCF-VI			✓		8189819	1	✓								
6/11/09	DCF-NW			✓		8189818	1	✓								
6/12/09	SG			✓		8189816	1	✓								
6/12/09	DCF-VI			✓		8189815	1	✓								
6/12/09	DCF-NW			✓		8189814	1	✓								
Relinquished (Signature)				Date/Time	Received by: (Signature)		Lab	Shipped via: FedEx, UPS or Other _____ Air Bill # _____								
				06-10 6420			Spectra									
Relinquished (Signature)				Date/Time	Received by: (Signature)		Remarks									
Relinquished (Signature)				Date/Time	Received for Laboratory by: (Signature)		Date/Time	Enclosed: <input type="checkbox"/> Parameter List with DTLs <input type="checkbox"/> Cover Letter								
								Split Samples: []Accepted []Declined _____								
								Signature								

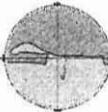
CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

2089060321

POINT
RUSTON

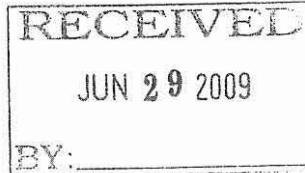
5219 N. Shirley St., Suite 100 Tacoma, WA 98407
Phone: 253-752-2185 Fax: 253-752-7083





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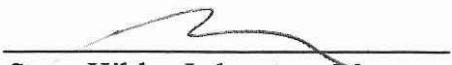
06/25/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-Vol.)
Date Received: 06/22/2009
Spectra Project: 2009060411

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189813	1	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/15/2009
8189813	1	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/15/2009
8189812	2	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/15/2009
8189812	2	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/15/2009
8189811	3	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/15/2009
8189811	3	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/15/2009
8189810	4	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/16/2009
8189810	4	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/16/2009
8189809	5	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/16/2009
8189809	5	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/16/2009
8189808	6	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/16/2009
8189808	6	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/16/2009
8189807	7	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/17/2009
8189807	7	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/17/2009
8189806	8	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/17/2009
8189806	8	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/17/2009

SPECTRA LABORATORIES



Steve Hibbs, Laboratory Manager
a8/sgh

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06/25/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-Vol.)
Date Received: 06/22/2009
Spectra Project: 2009060411

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189805	9	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/17/2009
8189805	9	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/17/2009
8189804	10	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/18/2009
8189804	10	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/18/2009
8189803	11	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/18/2009
8189803	11	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/18/2009
8189802	12	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/18/2009
8189802	12	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/18/2009
8189801	13	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/19/2009
8189801	13	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/19/2009
8189700	14	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/19/2009
8189700	14	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/19/2009
8189699	15	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/19/2009
8189699	15	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/19/2009

SPECTRA LABORATORIES

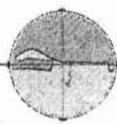
Steve Hibbs, Laboratory Manager
a8/sgh

PAGE 1 of 1

CHAIN OF CUSTODY RECORD

2009060411

**POINT
RUSTON**

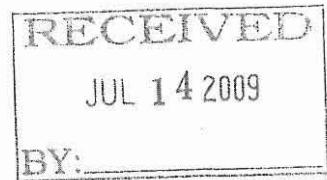
 5219 N. Shirley St., Suite 100 Tacoma, WA 98407
 Phone: 253-752-2185 Fax: 253-752-7083


PROJ. NO AIR MONITORING		PROJECT NAME POINT RUSTON, LLC (Hi-VOL)		NO. OF CONTAINERS <i>TOTAL: 10</i>	REMARKS									
SAMPLERS: (Signature) <i>J.D. Sh</i>														
DATE	STA #	TIME	COMP	GRAB	SAMPLE NUMBER									
6/15/09	SG			✓	8189813	1	✓							
6/15/09	OCF-VI			✓	8189812	1	✓							
6/15/09	OCF-NW			✓	8189811	1	✓							
6/16/09	SG			✓	8189810	1	✓							
6/16/09	OCF-VI			✓	8189809	1	✓							
6/16/09	OCF-NW			✓	8189808	1	✓							
6/17/09	SG			✓	8189807	1	✓							
6/17/09	OCF-VI			✓	8189806	1	✓							
6/17/09	OCF-NW			✓	8189805	1	✓							
6/18/09	SG			✓	8189804	1	✓							
6/18/09	OCF-VI			✓	8189803	1	✓							
6/18/09	OCF-NW			✓	8189802	1	✓							
6/19/09	SG			✓	8189801	1	✓							
6/19/09	OCF-VI			✓	8189700	1	✓							
6/19/09	OCF-NW			✓	81891099	1	✓							
Relinquished (Signature) <i>J.D. Sh</i>		Date/Time 0622 0139		Received by: (Signature) <i>Amanda West</i>		Lab <i>Spectra</i>	Shipped via: FedEx, UPS or Other _____ Air Bill # _____							
Relinquished (Signature)		Date/Time		Received by: (Signature)		Remarks								
Relinquished (Signature)		Date/Time		Received for Laboratory by: (Signature)		Date/Time	Enclosed:							
							<input type="checkbox"/> Parameter List with DTLs							
							<input type="checkbox"/> Cover Letter							
						Split Samples: [] Accepted [] Declined _____								
						Signature _____								



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07/10/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-vol)
Date Received: 06/29/2009
Spectra Project: 2009060537

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189697	1	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/22/2009
8189697	1	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/22/2009
8189696	2	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/22/2009
8189696	2	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/22/2009
8189695	3	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/22/2009
8189695	3	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/22/2009
8189694	4	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/23/2009
8189694	4	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/23/2009
8189693	5	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/23/2009
8189693	5	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/23/2009
8189692	6	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/23/2009
8189692	6	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/23/2009
8189691	7	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/24/2009
8189691	7	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/24/2009
8189690	8	Arsenic	< 0.05	µg/m ³	SW846 6010B	Filter	06/24/2009
8189690	8	Lead	< 0.05	µg/m ³	SW846 6010B	Filter	06/24/2009

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Steve Hibbs, Laboratory Manager
a8/scj



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07/10/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-vol)
Date Received: 06/29/2009
Spectra Project: 2009060537

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189689	9	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/24/2009
8189689	9	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/24/2009
8189688	10	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/25/2009
8189688	10	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/25/2009
8189687	11	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/25/2009
8189687	11	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/25/2009
8189686	12	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/25/2009
8189686	12	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/25/2009
8189685	13	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/26/2009
8189685	13	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/26/2009
8189684	14	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/26/2009
8189684	14	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/26/2009
8189683	15	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/26/2009
8189683	15	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/26/2009
8189698	16	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/22/2009
8189698	16	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/22/2009

SPECTRA LABORATORIES



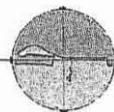
Steve Hibbs, Laboratory Manager
a8/scj

PAGE 1 OF 2

2009060537

CHAIN OF CUSTODY RECORD

POINT
RUSTON
5219 N. Shirley St., Suite 100 Tacoma, WA 98407
Phone: 253-752-2185 Fax: 253-752-7083



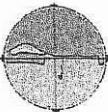
PROJ. NO	PROJECT NAME					NO. OF CONTAINERS	REMARKS	
AIR MONITORING	POINT RUSTON, LLC (Hi-VOL)							JEN R.
DATE	STA #	TIME	COMP	GRAB	SAMPLE NUMBER			
6/22/09	SG		✓		81891097	1	✓	
6/22/09	OCF-VI		✓		81891090	1	✓	
6/22/09	OCF-NW		✓		81891095	1	✓	
6/23/09	SG		✓		81891094	1	✓	
6/23/09	OCF-VI		✓		81891093	1	✓	
6/23/09	OCF-NW		✓		81891092	1	✓	
6/24/09	SG		✓		81891091	1	✓	
6/24/09	OCF-VI		✓		81891090	1	✓	
6/24/09	OCF-NW		✓		81891089	1	✓	
6/25/09	SG		✓		81891088	1	✓	
6/25/09	OCF-VI		✓		81891087	1	✓	
6/25/09	OCF-NW		✓		81891086	1	✓	
6/26/09	SG		✓		81891085	1	✓	
6/26/09	OCF-VI		✓		81891084	1	✓	
6/26/09	OCF-NW		✓		81891083	1	✓	
Relinquished (Signature)					Date/Time	Received by: (Signature)	Lab	Shipped via: FedEx, UPS or Other _____ Air Bill # _____
					6/29/09 3:06	Spencer 7/6/08 Spectra		
Relinquished (Signature)					Date/Time	Received by: (Signature)	Remarks	
Relinquished (Signature)					Date/Time	Received for Laboratory by: (Signature)	Date/Time	Enclosed:
								<input type="checkbox"/> Parameter List with DTLs <input type="checkbox"/> Cover Letter
							Split Samples: []Accepted []Declined _____	
							Signature _____	

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2
2009060537

POINT RUSTON

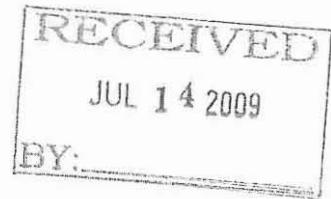
5219 N. Shirley St., Suite 100 Tacoma, WA 98407
Phone: 253-752-2185 Fax: 253-752-7083



PROJ. NO	PROJECT NAME						
AIR MONITORING POINT RUSTON, LLC (HI-VOL)							
SAMPLERS: (Signature)							
DATE	STA #	TIME	COMP	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	REMARKS
6/29/09 (CONTROL)			✓		8189698	1 ✓	
Relinquished (Signature)		Date/Time	Received by: (Signature)		Lab	Shipped via: FedEx, UPS or Other _____ Air Bill # _____	
<i>[Signature]</i>		6-29-09 3:06	<i>Mare Wolt</i>		<i>Spectra</i>		
Relinquished (Signature)		Date/Time	Received by: (Signature)		Remarks		
<i>[Signature]</i>							
Relinquished (Signature)		Date/Time	Received for Laboratory by: (Signature)		Date/Time	Enclosed:	
<i>[Signature]</i>						<input type="checkbox"/> Parameter List with DTLs <input type="checkbox"/> Cover Letter	
Split Samples: [] Accepted [] Declined _____		Signature _____					

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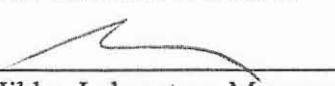
07/10/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-vol)
Date Received: 07/06/2009
Spectra Project: 2009070064

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189682	1	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/29/2009
8189682	1	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/29/2009
8189681	2	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/29/2009
8189681	2	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/29/2009
8189680	3	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/29/2009
8189680	3	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/29/2009
8189679	4	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/30/2009
8189679	4	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/30/2009
8189678	5	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/30/2009
8189678	5	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/30/2009
8189677	6	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/30/2009
8189677	6	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/30/2009
8189675	7	Arsenic	0.07	µg/m3	SW846 6010B	Filter	07/01/2009
8189675	7	Lead	< 0.05	µg/m3	SW846 6010B	Filter	07/01/2009
8189674	8	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	07/01/2009
8189674	8	Lead	< 0.05	µg/m3	SW846 6010B	Filter	07/01/2009

SPECTRA LABORATORIES


Steve Hibbs, Laboratory Manager
a8/ng



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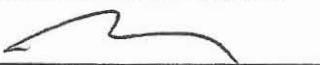
07/10/2009

Point Ruston
5219 N. Shirley St.,
Suite 100
Tacoma, WA 98407

Project: Air Monitoring (Hi-vol)
Date Received: 07/06/2009
Spectra Project: 2009070064

<u>Client ID</u>	<u>Spectra #</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Sampled</u>
8189673	9	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	07/01/2009
8189673	9	Lead	< 0.05	µg/m3	SW846 6010B	Filter	07/01/2009
8189671	10	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	07/02/2009
8189671	10	Lead	< 0.05	µg/m3	SW846 6010B	Filter	07/02/2009
8189670	11	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	07/02/2009
8189670	11	Lead	< 0.05	µg/m3	SW846 6010B	Filter	07/02/2009
8189676	12	Arsenic	< 0.05	µg/m3	SW846 6010B	Filter	06/30/2009
8189676	12	Lead	< 0.05	µg/m3	SW846 6010B	Filter	06/30/2009

SPECTRA LABORATORIES

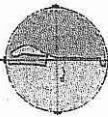


Steve Hibbs, Laboratory Manager
a8/ng

PAGE 1 of 1

2009070064

POINT
RUSTON



CHAIN OF CUSTODY RECORD

5219 N. Shirley St., Suite 100 Tacoma, WA 98407
Phone: 253-752-2185 Fax: 253-752-7083

PROJ. NO	PROJECT NAME <i>(H-VOL)</i> <i>AIR MONITORING POINT RUSTON, LLC</i>					NO. OF CONTAINERS	REMARKS
DATE	STA #	TIME	COMP	GRAB	SAMPLE NUMBER		
6/29/09	SG		✓		81891082	1	✓ AS, PB
6/29/09	OCF-VI		✓		81891081	1	✓
6/29/09	OCF-NW		✓		81891080	1	✓
6/30/09	SG		✓		81891079	1	✓
6/30/09	OCF-VI		✓		81891078	1	✓
6/30/09	OCF-NW		✓		81891077	1	✓
7/1/09	SG		✓		81891075	1	✓
7/1/09	OCF-VI		✓		81891074	1	✓
7/1/09	OCF-NW		✓		81891073	1	✓
7/2/09	OCF-VN		✓		81891071	1	✓
7/2/09	OCF-NW		✓		81891070	1	✓
6/30/09	CONTROL		✓		81891076	1	✓
Relinquished (Signature)	Date/Time		Received by: (Signature)		Lab	Shipped via: FedEx, UPS or Other _____ Air Bill # _____	
<i>[Signature]</i>	07/06/12 11:00		<i>[Signature]</i>		Spectra		
Relinquished (Signature)	Date/Time		Received by: (Signature)		Remarks		
<i>[Signature]</i>							
Relinquished (Signature)	Date/Time		Received for Laboratory by: (Signature)		Date/Time	Enclosed:	
<i>[Signature]</i>						<input type="checkbox"/> Parameter List with DTLs <input type="checkbox"/> Cover Letter	
Split Samples: []Accepted []Declined _____						Signature _____	



Weekly Site Inspection Report No. 2009-18531

Week of 5/31 - 6/10, 2009 Inspector Tim RUSITER

Operable Unit 02 – Asarco Tacoma Smelter Site (Point Ruston)

INSPECTION AREA	OVERAL CONDITION			NEED REPAIR?	COMMENTS/OBSERVATIONS
Gates:					
North (electric)	(G)	F	P	Y (N)	
South (electric)	(G)	F	P	Y (N)	
Pond	(G)	F	P	Y (N)	
Peninsula	(G)	F	P	Y (N)	
(Other) 54 TM	(G)	F	P	Y (N)	
Signage:					
Gates	(G)	F	P	Y (N)	
Perimeter	(G)	F	P	Y (N)	
Safety	(G)	F	P	Y (P)	
(Other)	G	F	P	Y N	
Public Streets:					
Ruston Way	(G)	F	P	Y (N)	
51 st & Gallagher	(G)	F	P	Y (N)	
Stack Hill	(G)	F	P	Y (N)	
(Other)	G	F	P	Y N	
BMPs:					
Berms	(G)	F	P	Y (N)	
Waddles	(G)	F	P	Y (N)	
Silt Fence	(G)	F	P	Y (N)	
(Other)	G	F	P	Y N	
Strom drains clean:					
Lower Site	(G)	F	P	Y (N)	
Stack Hill	(G)	F	P	Y (N)	
Stockpiles:					
Envirotac II	G	F	P	Y N	HOLDING ON STOCKPILE MAINTENANCE
Plastic	G	F	P	Y N	IN ANTICIPATION OF PLACING MATERIALS
Packed	G	F	P	Y N	SOILS ARE STABLE. NO NOTED DUST OR
Grass	G	F	P	Y N	EROSION PROBLEMS.
Dust:					
Traffic areas	(G)	F	P	Y (N)	WATER SPRAY AS NEEDED FOR DUST CONTROL
Excavation area	(G)	F	P	Y (N)	
(Other)	G	F	P	Y N	
Fencing:					
Site Perimeter	(G)	F	P	Y (N)	
Zone Separation	(G)	F	P	Y (N)	
(Other)	G	F	P	Y N	

Weekly Site Inspection Report No. 2009-0531
Operable Unit 02 – Asarco Tacoma Smelter Site (Point Ruston)

INSPECTION AREA	OVERAL CONDITION		NEED REPAIR?	COMMENTS/OBSERVATIONS
Docks:				
Barriers	(G)	F	P	Y (N)
Signs (Other)	(G)	F	P	Y (N)
G	F	P	Y	N
Cameras:				
	G	F	(P)	(Y) N
	G	F	P	Y N
	G	F	(P)	(Y) N
Health & Safety Plans:				
Site Superintendent	(G)	F	P	(Y) N <i>Need To Complete V.5 + Approve</i>
Construction Super.	(G)	F	P	(Y) N
Other	G	F	P	Y N

G=Good F=Fair P=Poor Y=Yes N=No

Misc. notes:

OBTAINED SOIL SAMPLES FROM SOME STOCKPILES FOR ANALYSIS

BACKFLOW DEVICES CERTIFIED 6-2-09

6-4-09 KEN WILSON SITE SAFETY CONSULTATION + HI-VOL AUDIT

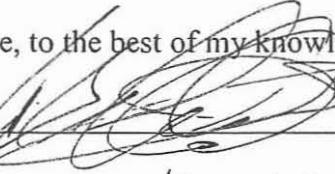
WEATHER:

Day of Week	Summary of Weather Conditions
Sunday 5/31	52°F / 71°F NNE WINDS 1 MPH / GUST 9 MPH, NO PRECIPITATION
Monday 6/1	54°F / 70°F SSW WINDS 1.6 MPH / GUST 7 MPH, NO PRECIPITATION
Tuesday 2	56°F / 88°F SSW WINDS 0.9 MPH / GUST 7 MPH, NO PRECIPITATION
Wednesday 3	58°F / 60°F N WINDS 1.1 MPH / GUST 11 MPH, NO PRECIPITATION
Thursday 4	61°F / 77°F SSW WINDS 1.6 MPH / GUST 33 MPH, NO PRECIPITATION
Friday 5	57°F / 65°F SSW WINDS 4 MPH / GUST 27 MPH, NO PRECIPITATION
Saturday 6	56°F / 62°F SSW WINDS 2.8 MPH / GUST 14 MPH, PRECIP Afternoon-Eve 0.41"

I certify that this report is true, accurate and complete, to the best of my knowledge and belief.

DATE: 6/8/09

SIGNED:

 Tim R

Title/Qualification of Inspector: Oversight / Health Safety Officer



Weekly Site Inspection Report No. 2009-0607

Week of 6/7 - 6/13, 2009 Inspector _____

Operable Unit 02 – Asarco Tacoma Smelter Site (Point Ruston)

INSPECTION AREA	OVERAL CONDITION	NEED REPAIR?	COMMENTS/OBSERVATIONS
Gates:			
North (electric)	(G) F P	Y N	
South (electric)	(G) F P	Y N	
Pond	(G) F P	Y N	
Peninsula	(G) F P	Y N	
(Other) 54 th	G (F) P	Y N	ELECTRICAL PROBLEMS - TROUBLESHOOTING
Signage:			
Gates	(G) F P	Y (N)	No PARKING" SIGN ADDED TO COOLING POND GATE
Perimeter	(G) F P	Y (N)	
Safety	(G) F P	Y (N)	TUNED UP ON 6-8-09
(Other)	G F P	Y N	
Public Streets:			
Ruston Way	(G) F P	Y (N)	
51 st & Gallagher	(G) F P	Y (N)	
Stack Hill	(G) F P	Y (N)	
(Other)	G F P	Y N	
BMPs:			
Berms	(G) F P	Y (N)	
Waddles	(G) F P	Y (N)	
Silt Fence	(G) F P	Y (N)	
(Other)	G F P	Y N	
Strom drains clean:			
Lower Site	(G) F P	Y (N)	
Stack Hill	(G) F P	Y (N)	
Stockpiles:			
Envirotac II	(G) F P	Y (N)	All piles STABLE - PLANS TO START SPREADING THEM OUT IN A FEW WEEKS
Plastic	(G) F P	Y (N)	
Packed	(G) F P	Y (N)	
Grass	(G) F P	Y (N)	
Dust:			SEE NOTES FOR OFFSITE INCIDENT 6-12
Traffic areas	(G) F P	Y (N)	
Excavation area	(G) F P	Y (N)	
(Other)	G F P	Y N	
Fencing:			
Site Perimeter	(G) F P	Y (N)	
Zone Separation	(G) F P	Y (N)	
(Other)	G F P	Y N	

Weekly Site Inspection Report No. 20081-0107
Operable Unit 02 – Asarco Tacoma Smelter Site (Point Ruston)

INSPECTION AREA	OVERAL CONDITION			NEED REPAIR?	COMMENTS/OBSERVATIONS
Docks:					
Barriers	(G)	F	P	Y	(N)
Signs	(G)	F	P	Y	(N)
(Other)	G	F	P	Y	N
Cameras:					
	G	F	P	(Y)	N
	G	F	P	(Y)	N
	G	F	P	(Y)	N
Health & Safety Plans:					
Site Superintendent	(G)	F	P	(Y)	N NEED TO GET V.5 REVISED & APPROVED
Construction Super.	(G)	F	P	(Y)	"
Other	G	F	P	Y	N

G=Good F=Fair P=Poor Y=Yes N=No

Misc. notes:

SENT ASPHALT SAMPLES FROM CITY OF TACOMA TO LAB IN ANTICIPATION OF IMPORTING STREET GRINDINGS.

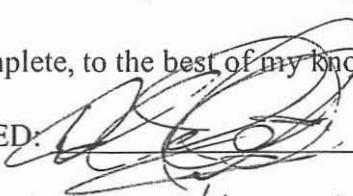
PURCHASED 12,000 GALLON WATER STORAGE TANK FOR DUST CONTROL
 6-12-09 REPORT OF VEHICLE SPINNING TIRES MAKING DUST, THEN DRIVER JUMPED OUT AND TOOK PICTURES OF DUST CLOUD. OFFSITE NEAR S. GATE.

WEATHER:

Day of Week	Summary of Weather Conditions
Sunday 6/7	54°F / 70°F SSW WINDS 1.2 MPH / GUST 9 MPH, NO PRECIPITATION
Monday 8	51°F / 71°F S WINDS 0.9 MPH / GUST 9 MPH, NO PRECIPITATION
Tuesday 9	52°F / 77°F NNE WINDS 0.8 MPH / GUST 7 MPH, NO PRECIPITATION
Wednesday 10	54°F / 71°F SSW WINDS 2.2 MPH / GUST 11 MPH, NO PRECIPITATION
Thursday 11	55°F / 75°F SSW WINDS 2.4 MPH / GUST 13 MPH, NO PRECIPITATION
Friday 12	56°F / 70°F S WINDS 1 mph / GUST 9 MPH, NO PRECIPITATION
Saturday 13	54°F / 77°F SSW WINDS 2 mph / GUST 11 MPH, NO PRECIPITATION

I certify that this report is true, accurate and complete, to the best of my knowledge and belief.

DATE: 6/15/09

SIGNED: 

Tim R.

Title/Qualification of Inspector: OVERSIGHT / HEALTH & SAFETY OFFICER



Weekly Site Inspection Report No. 2009-0604

Week of 6/14 - 6/20, 2009 Inspector Tim RUSTON

Operable Unit 02 – Asarco Tacoma Smelter Site (Point Ruston)

INSPECTION AREA	OVERAL CONDITION		NEED REPAIR?	COMMENTS/OBSERVATIONS	
Gates: North (electric) South (electric) Pond Peninsula (Other) 54 th	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	G	(F)	P	(Y) N	Blowing Fuses, TROUBLE SHOOTING. STAYS CLOSED
Signage: Gates Perimeter Safety (Other)	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	G	F	P	Y N	
Public Streets: Ruston Way 51 st & Gallagher Stack Hill (Other)	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	G	F	P	Y N	
BMPs: Berms Waddles Silt Fence (Other)	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	G	F	P	Y N	
Strom drains clean: Lower Site Stack Hill	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
Stockpiles: Envirotac II Plastic Packed Grass	(G)	F	P	Y (N)	PILES ARE STABLE & NO DUST REPORTS
	(G)	F	P	Y (N)	PLANS TO PLACE SOILS IN NEXT FEW
	(G)	F	P	Y (N)	WEEKS.
	G	F	P	Y N	
Dust: Traffic areas Excavation area (Other)	(G)	F	P	Y (N)	Water Spray As Needed
	(G)	F	P	Y (N)	
	G	F	P	Y N	
Fencing: Site Perimeter Zone Separation (Other)	(G)	F	P	Y (N)	
	(G)	F	P	Y (N)	
	G	F	P	Y N	

Weekly Site Inspection Report No. 2009-014
Operable Unit 02 – Asarco Tacoma Smelter Site (Point Ruston)

INSPECTION AREA	OVERAL CONDITION		NEED REPAIR?	COMMENTS/OBSERVATIONS	
Docks:					
Barriers	(G)	F	P	Y	(N)
Signs	(G)	F	P	Y	(N)
(Other)	G	F	P	Y	N
Cameras:					
	G	F	P	Y	N
	G	F	P	Y	N
	G	F	P	Y	N
Health & Safety Plans:					
Site Superintendent	(G)	F	P	(Y)	N NEED TO FINALIZE U.S UPDATES +
Construction Super.	(G)	F	P	(Y)	GET APPROVED
Other	G	F	P	Y	N

G=Good F=Fair P=Poor Y=Yes N=No

Misc. notes:

OBTAINED SAMPLES FROM TEST HOLES ALONG RUSTON WAY NEAR S-END OF SITE FOR ANALYSIS.

WEATHER:

Day of Week	Summary of Weather Conditions
Sunday 14	54°F / 64°F SSW WINDS 2.1 MPH / GUST 11 MPH, NO PRECIPITATION
Monday 15	53°F / 64°F SSW WINDS 1.4 MPH / GUST 10 MPH, NO PRECIPITATION
Tuesday 16	54°F / 71°F SSW WINDS 1.6 MPH / GUST 13 MPH, NO PRECIPITATION
Wednesday 17	57°F / 73°F SSW WINDS 2.8 MPH / GUST 15 MPH, PRECIP. EVE 0.05"
Thursday 18	51°F / 73°F SSW WINDS 3.4 MPH / GUST 16 MPH, NO PRECIPITATION
Friday 19	54°F / 70°F SSW WINDS 3.3 MPH / GUST 22 MPH, PRECIP MORN 0.03"
Saturday 20	51°F / 60°F SSW WINDS 0.8 MPH / GUST 14 MPH, NO PRECIPITATION

I certify that this report is true, accurate and complete, to the best of my knowledge and belief.

DATE: 6/22/09

SIGNED:

Tim R.

Title/Qualification of Inspector: Oversight Health & Safety Officer



Weekly Site Inspection Report No. 2009-002

Week of 6/21-6/27, 2009 Inspector Tim RUSTON

Operable Unit 02 – Asarco Tacoma Smelter Site (Point Ruston)

INSPECTION AREA	OVERAL CONDITION	NEED REPAIR?	COMMENTS/OBSERVATIONS
Gates:			
North (electric)	(G) F P	Y (N)	
South (electric)	(G) F P	Y (N)	
Pond	(G) F P	Y (N)	
Peninsula	(G) F P	Y (N)	
54th (Other) ELECTRIC	(G) F P	Y (N)	
Signage:			
Gates	(G) F P	Y (N)	
Perimeter	(G) F P	Y (N)	CHECKED & REPAIRED SIGNAGE AS NEEDED
Safety	(G) F P	Y (N)	
(Other)	(G) F P	Y N	
Public Streets:			
Ruston Way	(G) F P	Y (N)	
51st & Gallagher	(G) F P	Y (N)	
Stack Hill	(G) F P	Y (N)	
(Other)	G F P	Y N	
BMPs:			
Berms	(G) F P	Y (N)	
Waddles	(G) F P	Y (N)	
Silt Fence	(G) F P	Y (N)	REPAIRED DAMAGED SILT FENCE @ S. OUTFLW
(Other)	G F P	Y N	
Strom drains clean:			
Lower Site	(G) F P	Y (N)	
Stack Hill	(G) F P	Y (N)	
Stockpiles:			All PILES HOLDING. NO DUST OR EROSION NOTED SINCE FALL RAINS
Envirotac II	(G) F P	Y (N)	
Plastic	(G) F P	Y (N)	
Packed	(G) F P	Y (N)	
Grass	(G) F P	Y (N)	
Dust:			
Traffic areas	(G) F P	Y (N)	WATERED AS NEEDED. IMPORTED ASPHALT
Excavation area	(G) F P	Y (N)	GRINDING TO PLACE ON TRAFFIC AREAS
(Other)	G F P	Y N	
Fencing:			
Site Perimeter	(G) F P	Y (N)	
Zone Separation	(G) F P	Y (N)	MAINTAINED & REPAIRED AS NEEDED
(Other)	G F P	Y N	

Weekly Site Inspection Report No. 2009-06021
Operable Unit 02 – Asarco Tacoma Smelter Site (Point Ruston)

INSPECTION AREA	OVERAL CONDITION			NEED REPAIR?	COMMENTS/OBSERVATIONS
Docks:					
Barriers	(G)	F	P	Y	(N)
Signs	(G)	F	P	Y	(N)
(Other)	G	F	P	Y	N
Cameras:					
	G	F	(P)	(Y)	N
	G	F	P	(Y)	N
	G	F	(P)	(Y)	N
Health & Safety Plans:					
Site Superintendent	G	(F)	P	(Y)	N
Construction Super.	G	(F)	P	(Y)	N
Other	G	F	P	Y	N

G=Good F=Fair P=Poor Y=Yes N=No

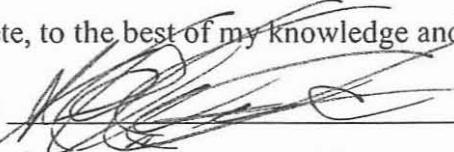
Misc. notes:

WEATHER:

Day of Week	Summary of Weather Conditions
Sunday 21	52°F 17°F SSW WINDS 2.1 mph / GUST 11 mph, PRECIP AFTER 3 EVE 0.33"
Monday 22	53°F 70°F SSW WINDS 2.8 mph / GUST 15 mph, NO PRECIPITATION
Tuesday 23	50°F 73°F NNE WINDS 0.8 mph / GUST 7 mph, NO PRECIPITATION
Wednesday 24	57°F 72°F SW WINDS 4.9 mph / GUST 31 mph, NO PRECIPITATION
Thursday 25	53°F 60°F SSW WINDS 5.7 mph / GUST 19 mph, PRECIP. EARLY MORN. 0.02"
Friday 26	53°F 72°F NNE WINDS 1.3 mph / GUST 13 mph, NO PRECIPITATION
Saturday 27	49°F 80°F SSW WINDS 1.1 mph / GUST 18 mph, NO PRECIPITATION

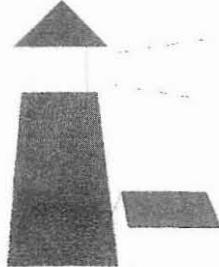
I certify that this report is true, accurate and complete, to the best of my knowledge and belief.

DATE: 6/29/09

SIGNED: 

Title/Qualification of Inspector: CONSTRUCTION OVERSIGHT / HEALTH & SAFETY OFFICER

RECEIVED
JUN 10 2009
BY: _____



WILSON EFFECTIVE
COMPLIANCE

June 7, 2009

Tim Rusher
Point Ruston, LLC
5219 North Shirley St, Suite 100
Ruston, WA 98407

RE: INSPECTION 6.4.2009

Dear Tim,

An inspection was performed on the above date.

Activities conducted on site during the inspection were excavation operations, installation of building foundation vapor barrier and continuing work on the upper floors of the parking garage. Issues concerning site access, decontamination, and personal protective equipment were reviewed.

WAC 296-800-17025 Hazard Communication Labeling - Flammables cabinet in lunchroom contains a mislabeled container. Restrict use or re-identify cabinet as FOOD ONLY.

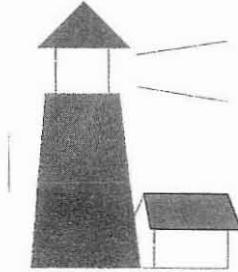
Previous inspection follow-up:

WAC 296-843-14005 Site Control - Lunchroom floor contained soils. Although the dirt may come from the clean area, past inspections of lunchrooms conducted by OSHA have utilized wipe samples as evidence of cross-contamination. Lunchroom floor contains some soil as before.

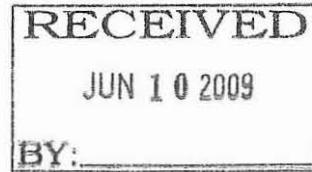
Sincerely,

A handwritten signature in black ink, appearing to read "Ken Wilson, CSP".

Ken Wilson, CSP
Wilson Effective Compliance



WILSON EFFECTIVE
COMPLIANCE



June 7, 2009

Tim Rusher
MC Construction
5219 N Shirley St, Suite 100
Ruston, WA 98407

RE: AUDIT TRANSMITTAL

Dear Tim,

I have attached the audit where the leg work was completed last Thursday. There were no surprises. Hope the construction season goes well for you. If there are any questions, please give me a call at 253-377-8580.

Thank you.

Sincerely,

Ken Wilson, CSP

QUARTERLY PERFORMANCE AUDIT
OF THE
AIR QUALITY MONITORING SYSTEM
AT THE
ASARCO SUPERFUND SITE

June 4, 2009

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Appendix C – Orifice Transfer Standard Certificate	14

Introduction

The ASARCO Superfund Site (the Site) employs an air quality monitoring system as a function of the requirements of the cleanup program. This system is managed by Point Ruston, LLC. The cleanup program is being conducted in Ruston, Washington. The system is designed to measure releases of arsenic and lead particulate from operations at the Site.

The air quality monitoring system consists of three stations. These are the South Gate Station located at the southwest edge of the Site, the OCF Vault #1 Station located at the southern edge of the OCF near 52nd Street and Bennett Street and the OCF NW Station located at the Northwest edge of the site at N 54th and Bennett Streets. All stations each hold a total suspended particulate (TSP) monitor.

The quality control program designed for the air quality monitoring system requires quarterly audits of the system as it is in operation. This is one of those audits.

Method

A single point audit was conducted of each piece of equipment using a variable orifice. The audit consists of using a calibrated orifice to compare measured volumes versus reported volumes. An error of 7% or less is within the tolerances of the system.

The following procedures were utilized during the audit:

TSP Performance Audit

Determine equipment operating conditions, including temperature, pressure, and Dixon Chart reading.

Remove filter cassette and place in a protective cover.

Install clean filter, calibrating orifice, and manometer

Start equipment, checking for leaks and allow flow to stabilize for several minutes.

Note Dixon Chart reading and orifice pressure.

Return system to operation, noting any changes in operation.

Verify flow determined by calibrating orifice is within 7% of reported flow from previous calibration.

Verify flow is within operating parameters of 1.1 to 1.7 m³/min.

Audit Results

The audit was conducted in total on June 4, 2009. The system was in operation at the time of the audit. Flow rates were within acceptable range of their respective calibrations and within operating tolerances. The summary of the audit is in the Audit Data Report to follow.

The flow rates were determined through the use of EPA reference methods as found in 40 CFR 50, Appendix M.

All data and certificate of calibration for the calibrating orifice are attached in Appendices A and C, respectively. Calibration data as provided by the system operator is provided in Appendix B.

Appendix A

DATA SHEETS

FIGURE G - 4
HIGH VOLUME SAMPLER AUDIT

SITE Point RustonDATE 6/14/09STATION OCF VAULTOPERATOR KLAUDIT ORIFICE No. 676CERT. DATE 8/19/09BAROMETRIC PRESSURE 29.85TEMPERATURE 291 K

POINT	MANOMETER			Transducer Reported		Calib	Audit	%
	Left	Right	Total	Flow	Flow	Flow	Flow	DIFF
1	3.63	3.63	7.26	54.7	71.9	71.1	62.7	13.4
2	3.10	3.09	6.19	50.6	64.8	64.1	57.9	10.7
3	2.63	2.60	5.23	47.5	59.3	58.6	53.2	10.2
4	2.09	2.05	4.14	42.1	49.9	49.4	47.3	4.4
5	1.55	1.53	3.08	37.0	41.0	40.5	40.8	.7

T° C = 5/9(°F - 32)

T° K = °C + 273

Calibrated Flow = Reported Flow * CF

Audit Flow = Orifice Flow * CF

Correction Factor (CF) = ((29.92/BP) * (T K/298))^{0.5} = .989Pressure Transducer reading for a normal run = 48.1 43.0% = (Calibrated Flow - Audit Flow) / Audit Flow * 100 = -7%

Audit Limits: Calibrated flow must be within +/- 7% of Audit Flow at point closest to usual run flow

Comment

FIGURE G - 4
HIGH VOLUME SAMPLER AUDIT

SITE Point RustonDATE 6/4/2009STATION OCF - NWOPERATOR KWAUDIT ORIFICE No. 676CERT. DATE 8.19.2008BAROMETRIC PRESSURE 29.85TEMPERATURE 291 K

POINT	MANOMETER			Transducer	Reported	Calib	Audit	%
	Left	Right	Total	Flow	Flow	Flow	Flow	DIFF
1	3.60	3.67	7.27	55.8	64.1	63.4	62.9	0.8
2	3.37	3.42	6.79	53.9	62.0	61.3	60.6	1.2
3	3.10	3.16	6.26	51.6	59.4	58.8	58.2	1.0
4	2.79	2.79	5.53	48.5	56.0	55.4	54.7	1.3
5	2.20	2.25	4.45	41.6	48.3	47.8	49.1	2.7

T° C = 5/9(F° - 32)

T° K = °C + 273

Calibrated Flow = Reported Flow * CF

Audit Flow = Orifice Flow * CF

Correction Factor (CF) = $((29.92/BP) * (T / 298))^{0.5}$ = 1.989Pressure Transducer reading for a normal run = 50.0% = (Calibrated Flow - Audit Flow) / Audit Flow * 100 = 1.3%Audit Limits: Calibrated flow must be within +/- 7% of Audit Flow at point closest to usual
run flow

Comment

FIGURE G - 4
HIGH VOLUME SAMPLER AUDIT

SITE Point RustonDATE 6/4/09STATION 50074tOPERATOR KWAUDIT ORIFICE No. 1076CERT. DATE 8/19/08BAROMETRIC PRESSURE 29.85TEMPERATURE 294 K

POINT	MANOMETER			Transducer	Reported	Calib	Audit	%
	Left	Right	Total	Flow	Flow	Flow	Flow	DIFF
1	2.88	2.90	5.78	58.8	56.0	55.6	55.8	0.4
2	1.79	1.80	3.59	47.2	42.9	42.6	44.0	3.2
3	2.87	2.38	4.75	51.7	48.0	47.1	50.6	5.9
4	2.22	2.23	4.45	52.0	48.4	48.0	49.0	2.0
5	1.60	1.62	3.22	44.8	40.2	39.9	41.6	4.1

T° C = 5/9(°F - 32)

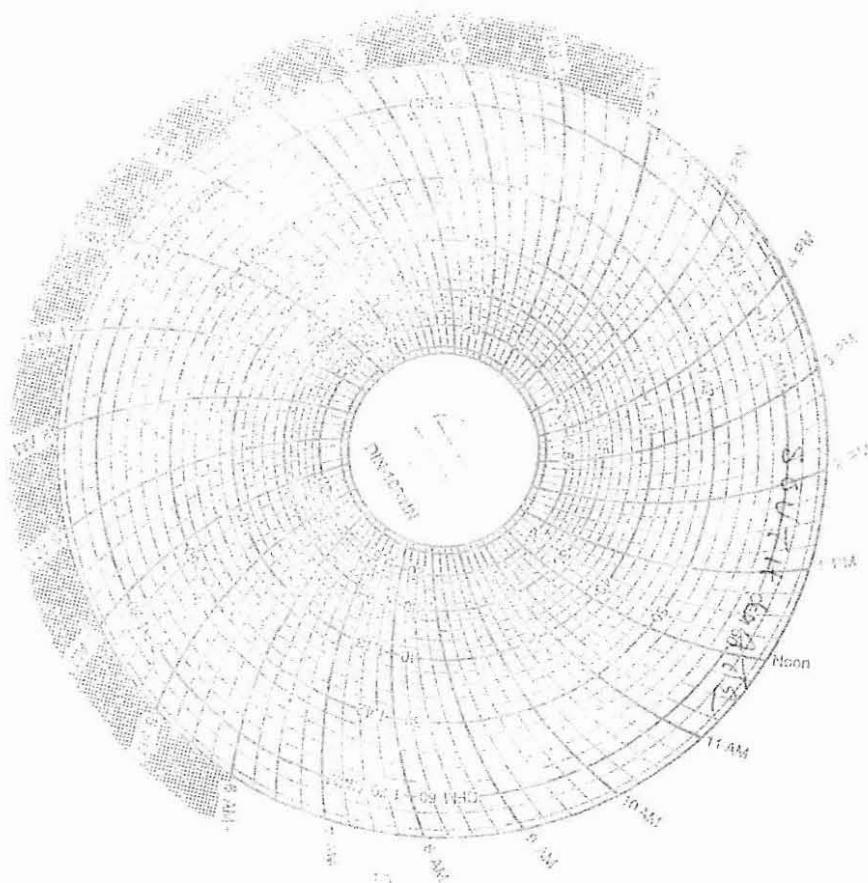
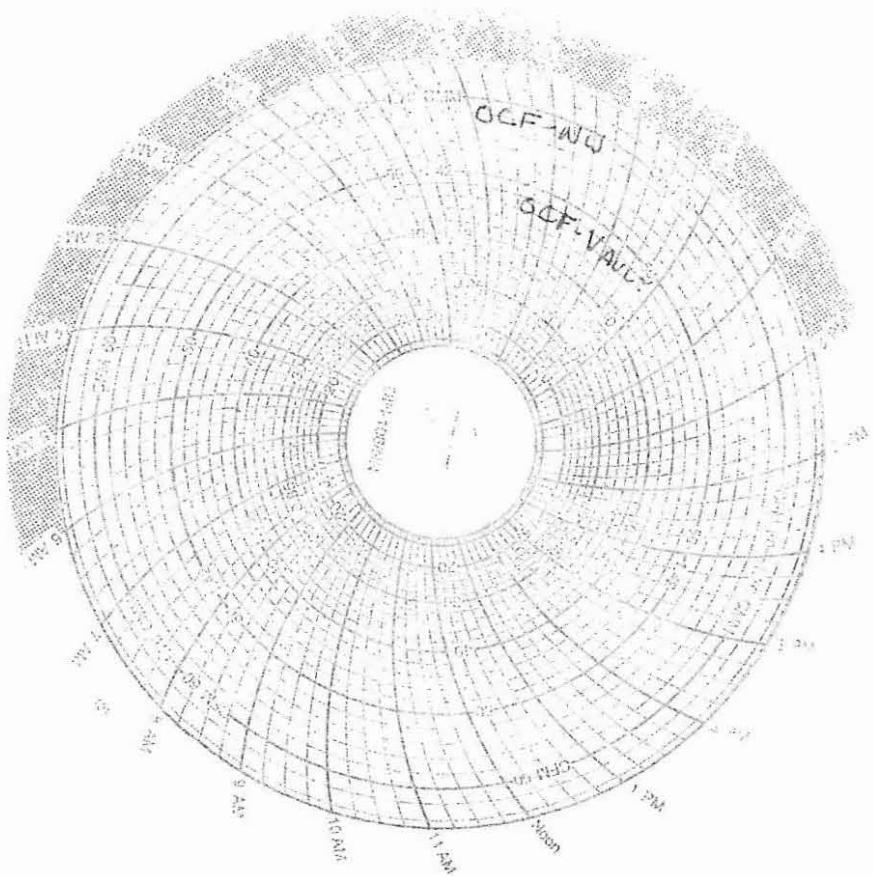
T° K = °C + 273

Calibrated Flow = Reported Flow * CF

Audit Flow = Orifice Flow * CF

Correction Factor (CF) = $((29.92/BP) * (T/K/298))^{0.5} = \underline{\quad, 992}$ Pressure Transducer reading for a normal run = 50.0% = (Calibrated Flow - Audit Flow) / Audit Flow * 100 = 2.0 %Audit Limits: Calibrated flow must be within +/- 7% of Audit Flow at point closest to usual
run flow

Comment



Appendix B

CALIBRATION SHEETS



5219 N. Shirley Street, Suite 100
 Ruston, WA 98407
 Phone: 253-752-2185
 Fax: 253-752-7083

HIGH VOLUME (TSP) SAMPLER CALIBRATION

STATION NAME South Gate DATE 6/2/2009

ORIFICE ID 207D CALIBRATED BY: Tim Rusher

MOTOR NO. 1040809 NEW / REPAIRS ?
Replaced Brushes

TEMPERATURE 26 C 299 K (Ta) INSPECTION:
 TRANSFORMER X

PRESSURE 29.97 in Hg 761 mm Hg (Pa) TRANSDUCER X

SHELTER X POWER CORD X Repaired

PLATFORM X TIMER X

MANOMETER (2.8" - 6")		DICKSON	TOTAL *	SQUARE	(SQUARE ROOT	Last
LEFT	RIGHT	TOTAL	CFM	C	ROOT	column *
2.70	2.60	5.30	56.50	5.203382137	2.281092312	1.518714862
2.50	2.40	4.90	55.00	4.810674051	2.193324885	1.459762278
2.20	2.10	4.30	52.75	4.221611922	2.054656157	1.366619754
2.00	1.90	3.90	50.25	3.828903836	1.956758502	1.300862789
1.80	1.70	3.50	47.50	3.436195751	1.853697858	1.23163789

Qstd
cfm

$$\text{Pa} / \text{Ta} * 295/765 = \underline{0.98177021444} = \text{C}$$

BEST FIT LINE:

$$1 / m = 1 / 1.48878 = \underline{0.671690915} = \text{D}$$

(Qstd m)

$$m = \frac{1.125652818}{\text{Slope}} b + \frac{-10.4283688}{\text{Intercept}}$$

$$\text{correlation} = \underline{0.989373032}$$

1. Get readings. 2. Run a linear regression on Total VS CFM Is correlation better than 0.98?

3. Complete the remaining operations in the table above, which equal the following operation:

$$\text{Qstd} = 1 / m ((\text{SQRT} (\text{TOTAL}(\text{Pa} / 765) (295 / \text{Ta}))) - \text{b})$$

4. Run a linear regression on CFM vs Qstd. Use this equation of line for the calibration sheet.



5219 N. Shirley Street, Suite 100
Ruston, WA 98407
Phone: 253-752-2185
Fax: 253-752-7083

HIGH VOLUME (TSP) SAMPLER CALIBRATION

STATION NAME	OCF-NW		DATE	5/12/2009	
ORIFICE ID	207D		CALIBRATED BY:	Jen Rusher	
MOTOR NO.	1040309		NEW / REPAIRS ? New Brushes		
TEMPERATURE	16	C	289 K (Ta)	INSPECTION: TRANSFORMER <input checked="" type="checkbox"/>	
PRESSURE	29.93	in Hg	760 mm Hg (Pa)	TRANSDUCER <input checked="" type="checkbox"/>	
			SHELTER <input checked="" type="checkbox"/>	POWER CORD <input checked="" type="checkbox"/>	
			PLATFORM <input checked="" type="checkbox"/>	TIMER <input checked="" type="checkbox"/>	

MANOMETER (2.8" - 6")		TOTAL	DICKSON CFM	TOTAL * C	SQUARE ROOT	(SQUARE ROOT -0.02006) * D (Qstd b)	Last column * 35.3
LEFT	RIGHT						
3.15	3.60	6.75	54.00	6.847104315	2.616697215	1.744137626	61.5680582
2.90	3.40	6.30	52.00	6.390630694	2.527969678	1.684540146	59.46426715
2.60	3.10	5.70	48.25	5.781999199	2.404578799	1.601659613	56.53858434
2.40	2.80	5.20	46.75	5.274806287	2.296694644	1.529194806	53.98057667
2.00	2.50	4.50	44.00	4.56473621	2.136524329	1.421609861	50.18282811

Qstd
cfm

$$\text{Pa} / \text{Ta} * 295/765 = \underline{1.01438582446} = \text{C}$$

BEST FIT LINE:

$$1 / m = 1 / 1.48878 = \underline{0.671690915} = \text{D}$$

(Qstd m)

$$m = \frac{\text{Slope}}{\text{correlation}} + \frac{\text{Intercept}}{2.165399184}$$

1.105744157 + 0.993183933

1. Get readings. 2. Run a linear regression on Total VS CFM Is correlation better than 0.98?

3. Complete the remaining operations in the table above, which equal the following operation:

$$\text{Qstd} = 1 / m ((\text{SQRT} (\text{TOTAL}(\text{Pa} / 765) (295 / \text{Ta}))) - \text{b})$$

4. Run a linear regression on CFM vs Qstd. Use this equation of line for the calibration sheet.



**5219 N. Shirley Street, Suite 100
Ruston, WA 98407
Phone: 253-752-2185
Fax: 253-752-7083**

HIGH VOLUME (TSP) SAMPLER CALIBRATION

STATION NAME	<u>OCF-V1</u>	DATE	<u>5/11/2009</u>
ORIFICE ID	<u>207D</u>	CALIBRATED BY:	<u>Jen Rusher</u>
NEW / REPAIRS ?			

MOTOR NO. 1050809 **NEW / REPAIR ?** New Motor

PRESSURE 30.31 in Hg 1024 mm Hg (Pa) TRANSDUCER X

SHEETER X POWER CORD X

PLATFORM X TIMER X

MANOMETER (2.8" - 6")		DICKSON CFM	TOTAL * C		SQUARE ROOT	(SQUARE ROOT -0.02006) * D (Qstd b)	Last column * 35.3
LEFT	RIGHT		TOTAL				
3.50	3.80	56.25	7.30	10.08195096	3.175208805	2.119284787	74.81075298
3.20	3.50	54.50	6.70	9.253297454	3.041923315	2.029758134	71.65046214
2.80	3.20	52.00	6.00	8.286535034	2.878634231	1.920077834	67.77876539
2.50	2.80	50.00	5.30	7.319772613	2.705507829	1.803790909	63.67381908
2.00	2.30	46.25	4.30	5.938683441	2.436941411	1.623397286	57.30592419

Qstd
cfm

$$Pa / Ta * 295/765 = 1.38108917227 = C$$

BEST FIT LINE:

$$1 / m = 1 / 1.48878 = \frac{0.671690915}{(Qstd\ m)} = D$$

$$m = \frac{1.753315865}{Slope} b + \frac{-23.77781707}{Intercept}$$

$$correlation = 0.998937117$$

1. Get readings.
 2. Run a linear regression on Total VS CFM Is correlation better than 0.98?
 3. Complete the remaining operations in the table above, which equal the following operation:

$$Q_{std} = 1 / m ((\text{SQRT} (\text{TOTAL}(Pa / 765) (295 / Ta))) - b)$$

4. Run a linear regression on CFM vs Qstd. Use this equation of line for the calibration sheet.

Appendix C

ORIFICE TRANSFER STANDARD CERTIFICATE

Shawnee Instruments
 607 Laurelwood Dr.
 Cleves, Ohio 45002
 513-467-9825

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5028A

Date - Aug 19, 2008 Rootsometer S/N 9833620 Ta (K) - 299
 Operator Tisch Orifice I.D. - 67G Pa (mm) - 753.11

PLATE OR VDC #	VOLUME START (m ³)	VOLUME STOP (m ³)	DIFF VOLUME (m ³)	DIFF TIME (min)	METER Hg (mm)	ORFICE H ₂ O (in.)
1	NA	NA	1.00	1.2180	4.5	1.50
2	NA	NA	1.00	0.9430	7.4	2.50
3	NA	NA	1.00	0.8610	8.8	3.00
4	NA	NA	1.00	0.7930	10.3	3.50
5	NA	NA	1.00	0.5980	17.6	6.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9817	0.8060	1.2171		0.9940	0.8161	0.7717
0.9779	1.0370	1.5713		0.9902	1.0500	0.9963
0.9761	1.1336	1.7213		0.9883	1.1479	1.0914
0.9741	1.2284	1.8592		0.9863	1.2438	1.1788
0.9644	1.6128	2.4343		0.9765	1.6330	1.5434

Qstd slope (m) = 1.50660 Qa slope (m) = 0.94341
 intercept (b) = 0.00755 intercept (b) = 0.00479
 coefficient (r) = 0.99991 coefficient (r) = 0.99991

y axis = SQRT[H₂O(Pa/760)(298/Ta)] y axis = SQRT[H₂O(Ta/Pa)]

CALCULATIONS

$$V_{std} = \text{Diff. Vol} [(\text{Pa}-\text{Diff. Hg})/760] (298/\text{Ta})$$

$$Q_{std} = V_{std}/\text{Time}$$

$$V_a = \text{Diff Vol} [(\text{Pa}-\text{Diff Hg})/\text{Pa}]$$

$$Q_a = V_a/\text{Time}$$

For subsequent flow rate calculations:

$$Q_{std} = 1/m \{ [\text{SQRT}(H_2O(\text{Pa}/760)(298/\text{Ta}))] - b \}$$

$$Q_a = 1/m \{ [\text{SQRT } H_2O(\text{Ta}/\text{Pa})] - b \}$$